Physician's Assistants

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FOR SEVERAL YEARS, the medical literature has been filled with articles citing statistics on the crisis in health manpower. For example, merely to maintain the 1960 ratio of physicians to population in 1970, it will be necessary to have a net growth of about 20 percent of the 1960 supply of 257,000—an increase of more than 50,000 doctors.[1] In 1900 there was one allied health worker for each physician. In 1965 the ratio was about ten to one; and today there are approximately 13 allied health workers for each physician. These allied health workers fall into 268 classifications, and in December 1965, according to the Department of Health, Education and Welfare, nearly three million people were employed in the health services and related fields.[2] At that time, the health services industry was the third largest in the nation; and if the total investment in health care increases as predicted during the next decade, the health field may rank first among American employers, with almost twice as many personnel as are currently employed. In the categories of aides, orderlies, and attendants alone, 410,000 persons were employed in 1963; by 1966, the number had risen to nearly 475,000.[3]

The ever-expanding demand for health services, attributable to population and economic growth, technological-scientific advances, and rising public expectations, has resulted in a compounding of manpower problems.[4] The expansion of health services, growth of prepayment, and increasing importance of health as a social value during the past two or three decades have paved the way for this manpower crisis; and recent legislation and the establishment of new programs such as Medicare have focused professional and public attention on health manpower needs.[5] With the changes taking place in medicine today due to rapid technological advances and the greater utilization of health care services by the consumer, it is certain that ever greater numbers of properly trained allied health personnel, as well as of physicians, will be needed in the future.

The traditional means of meeting the health manpower shortage has been to increase the number of places in medical schools but it is obvious that this measure will not be adequate to meet the predicted shortage of one million additional health workers expected by 1975.[6] New types of personnel will have to be developed to meet the increasing demand for comprehensive health care.

Delegation of specific tasks is one way of utilizing existing manpower effectively; and if new types of personnel are established, even greater efficiency may be achieved. "If a doctor can delegate tasks to a nurse or a properly trained pediatric nurse associate or pediatric assistant, and if on down the line there is a delegation of chores to lesser trained persons who are capable of properly performing specific tasks, the resultant effect will be a greater availability and distribution of high quality health care services."[7] Many existing positions could be staffed by personnel with less formal training than is now required, eliminating one type of waste of manpower.

One of the most promising categories of new personnel is the "physician assistant," who would handle routine duties, requiring some medical skill, that today take up much of the doctor's time.

A good example is the Physician's Assistant Training Program begun at Duke University in 1966. Under this career program individuals with a background in health care, such as medical corps-

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men and Licensed Practical Nurses, are trained to assist the physician in carefully defined areas of both clinical and research practice. In patient care, the physician's assistant, "learns to draw blood, start and regulate intravenous infusions, intubate the GI tract, and do other procedures classically performed by the doctor. He is trained to monitor vital signs, give medications, and keep progress reports, skills classically performed by nurses. He is also taught to operate certain diagnostic and therapeutic instruments, such as an EKG machine and respirator, as well as to carry out routine laboratory studies commonly done by technologists. The program calls for intensive training in areas which will complement available health team talents without attempting to replace available talents."[8]

The physician's assistant curriculum takes two years of pre-clinical and clinical work after high school graduation. Graduates of the program will specialize in one of six clinical areas, such as renal dialysis or cardiac catheter lab, and will work under the supervision of one or more physicians in a hospital, medical center, or private office or group. Salaries for the physician assistants already trained average slightly more than $10,000 per year. Many medical schools across the country have observed the Duke University program with interest, and at least ten others have similar programs under way or in the planning stage.

One largely untapped source of physician's assistants is the use of medical corpsmen released from the armed forces. Programs are now being started "to document the Army corpsmen's experiences and to cooperate with civilian institutions in the same area, and link civilian needs with trained personnel as they leave the Army." Already, the Bureau of Prisons employs 125 former corpsmen as physician's assistants in 26 Federal prisons. Their greatest contribution is in "extending the physician by their day-to-day functions in the area of diagnostic evaluation and the treatment of medical and surgical conditions." These physician's assistants perform an estimated 70 percent of all direct patient care functions, including parts of physical examinations, routine clinical laboratory tests, and physical therapy.[9]

Another program, funded by a grant from the Office of Special Manpower Programs of the U.S. Department of Labor to the Santa Clara Medical Society, has the initial goal of helping at least 50 discharged medical corpsmen in Santa Clara County to find jobs or to further their education in the health fields. Objectives for the first year of operation are to:

1. Provide these dischargees with counseling services by referral and direct contact with representatives of local health and education agencies;

2. Evaluate current skills of the dischargees and identify training or educational needs to bring the dischargees up to a level of employability in a health field;

3. Work with the local health and educational institutions, including the Veterans Administration, to arrange for training and/or job placement, and

4. Work with appropriate state and local agencies to modify licensing procedures to make provisions for the utilization of these trained dischargees.[10]

A similar program, called Medex, is being undertaken by the Washington State Medical Association Education and Research Foundation and the Department of Preventive Medicine of the University of Washington Medical School. The purpose of Medex is to give former corpsmen three months of intensive training, followed by a 12-month preceptorship with selected physicians.

Since about 30,000 corpsmen are discharged annually, some with quite extensive medical training, programs of this type may prove quite valuable in helping to resolve some of the problems of manpower shortages.[11]

A more specialized career program, started by San Francisco's Pacific Medical Center and City College of San Francisco, will train students as orthopedic assistants. Graduates of the two-year program will assist the orthopedic surgeon in patient care in the cast room, operating room, emergency room, office, and in the application of traction. The program has the support of the American Academy of Orthopedic Surgeons, and is funded by a grant from the United States Public Health Service.[12]

The specialty of pediatrics, with the active participation of the American Academy of Pediatrics, has fostered more programs to date than has any other area of medicine. The shortage of pediatricians is particularly acute; by 1980, there will be an estimated 76 million children in the United States. To maintain the 1961 pediatrician/child ratio of 151/100,000, almost 115,000 pediatricians would be needed, or 100,000 more than are presently in practice.[13] In June of 1969, the execu-

tive board of the American Academy of Pediatrics approved the establishment of a Division of Allied Child Health Manpower. The board also endorsed the official position of the Academy concerning allied child health manpower: "that the physician may delegate to a properly trained individual working under his supervision the responsibility of providing appropriate portions of health examinations and health care for infants and children."[14]

The Academy has identified three categories of allied health personnel: Pediatric nurse associates, pediatric office assistants, and pediatric aides.[15] The pediatric nurse associate will be an RN whose activities will be largely centered on direct patient care. The pediatric office assistant will have completed two years of college, and will be supervised by the physician or the nurse associate in such duties as hearing and vision screening and education-counseling. The pediatric aide, usually trained on the job after high school graduation, will help the physician, nurse associate, or pediatric office assistant in routine or non-skilled tasks.

The three types of allied health workers outlined above will be developed under the American Academy of Pediatrics' Allied Child Health Manpower Training Program. However, other programs are being established at medical schools around the country to train new types of pediatric health professionals. One of the most important of these is the Child Health Associate Program at the University of Colorado. The curriculum will take five years after graduation from high school, including two years of college as a prerequisite, two years of clinical instruction, and one year of internship, and will cover the basic sciences and clinical experience in many different settings. Study of the social, behavioral, psychological, and ecological aspects of health care for children will be included in the curriculum. Graduates will have "problem-solving and decision-making capabilities in certain areas of child care which will closely approximate those of physicians. They will be qualified to diagnose, prevent, and treat most of the common medical problems of childhood. On completion of the course of study, the Pediatric Associate will have the knowledge and skill to care for approximately 80 percent of the patients seen in a typical pediatric practice but with emphasis on preventive pediatrics and in keeping children healthy, both physically and mentally."[16]

Programs such as those discussed here cannot be successful without the sanction of organized medicine, whether national, state, local, or specialty. The Councils on Health Manpower and Medical Education of the AMA are helping to develop guidelines for the education of the physician assistant, in consultation with the program directors. According to Joseph Donovan, Executive Director of the Santa Clara County Medical Society and consultant on health manpower to the U.S. Department of Health, Education and Welfare, "The road to take is probably through the state medical associations recognizing there is a manpower shortage and it's going to get worse." It is also necessary for organized medicine to identify local needs and set local priorities. Donovan also stated that, ". . . the leadership for doing it on the state basis should come from the incentive and encouragement of the AMA."[17]

It is possible that there may be problems in the acceptance of new types of health professionals by physicians, by nurses, and by the patient. Physicians may be concerned about the possibility of malpractice suits, of assistants setting up their own practices, or of losing personal contact with their patients. Licensing and certifications standards, as well as new legislation, should be adequate to cope with the first two problems. And by freeing the doctor from routine tasks, the physician's assistant would leave him more time to concentrate on those patients and situations requiring his special skills. Pediatricians working with nurse practitioners report that this association "provides them with at least one-third more time than they formerly had for patient care, reading, attendance at meetings, and other purposes. . . . Both professionals gain and the net result is improved patient care, benefit to society by conservation of scarce manpower resources, and the development of the role of each health professional to its fullest."[18]

Some nurses may feel threatened by the establishment of a new type of health professional; but nursing is a profession concerned with direct patient care, and the nurse is most efficiently used as the physician's professional associate, rather than as his assistant. And finally, although there may be some initial resistance, it has been found that patients quickly establish rapport with the physician assistant or nurse practitioner, and actually feel more free to call with minor problems.

It will be some time before educational programs now being planned will begin to produce large numbers of physician assistants. In a recent survey of practicing physicians in Wisconsin, it was found

that, among respondents, "61 percent believed that assistants were needed, and 42 percent stated that they would use an assistant in their practice." It is obvious that a real need is felt by physicians, and that there will be openings for as many assistants as can be educated in the next several years.[19]

REFERENCES

1. Information to prospective applicants to Child Health Associate Program, University of Colorado Medical Center
2. Abstract of transitional report, Health Manpower Research Group
3. Schechter DS: Innovations in education and training of health manpower. Speech before the American Public Health Association, 1966
4. Abstract of transitional report, *op. cit.*
5. Schechter DS: *op. cit.*
6. Levin T: Education of health manpower: A key to social progress in health care. Report of the Albert Einstein College of Medicine, Lincoln Hospital, 1968
7. Degnon GK: Pediatric response to health manpower shortages. Bull Pediat Prac, 1969
8. Stead EA, Jr: The Duke plan for physician's assistants
9. Physician Assistants Indorsed, U S Medicine, 1969
10. A Military Medical Corpsmen Project, Santa Clara County Medical Society, *In* Conference on Comprehensive Health Planning, Progress, Problems, Perspectives. California Medical Education and Research Foundation, 1969
11. Medical News Report, Vol 1, No 11, 1969
12. PMCs orthopedic assistants program becomes new health career. Spirit, Vol 9, No 12, 1968
13. Hecker JA, Silver HK: Trends in the provision of health care to children through the utilization of allied health professionals. The New Physician, 1969
14. Executive board initiates child health manpower training in a major effort to improve pediatric care. Newsletter of the American Academy of Pediatrics, 1969, Vol 20, No 12
15. Degnon GK: *op. cit.*
16. Information to prospective applicants to Child Health Associate Program, *op. cit.*
17. New health workers—what will they do? American Medical News, 1969
18. Hecker JA, Silver HK: *op. cit.*
19. Coye RD, Hansen MF: The doctor's assistant, a survey of physicians' expectations. JAMA, 1969, Vol 209, No 4